REMARKS

This Amendment is responsive to the Office Action mailed December 14, 2005. Applicants respectfully request reconsideration of the application as amended. Claim 1 is currently pending in this application and is subject to examination. Amendments were made throughout the specification to correct minor errors, as requested by the Examiner. No new matter has been introduced. Claim 1 was amended to more clearly reflect that the promoter of the claimed process is a byproduct of a method for producing titanium tetrachloride from titanium ore. Support for this amendment can be found in the present application at page 8, lines 7-8, page 9, lines 1-2 and 19-20, page 10, lines 3-5, from page 10, line 16 to page 11, line 15 and in the example provided on pages 11-12.

Rejection Under 35 U.S.C. § 103(a)

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,523,453 (hereinafter, the '453 patent) to Breikss. The Examiner alleges that the difference between claim 1 and the '453 patent is the source of the promoter and that this feature is a modification that would be obvious to one of ordinary skill in the art. The Examiner thus concludes that claim 1 is not patentably distinct over the '453 patent. Applicants respectfully submit that claim 1 as amended distinguishes patentably over the '453 patent for the reasons set forth below.

The Examiner has determined the difference between originally-filed claim 1 and the '453 patent to be the source of the promoter. Specifically, the Examiner asserts that the promoter of originally-filed claim 1 merely comprises either iron (II) chloride ($FeCl_2$) or manganese (II) chloride ($MnCl_2$) obtained as a byproduct from the production of titanium tetrachloride ($TiCl_4$) from titanium ore. Applicants respectfully disagree. The promoter of originally-filed claim 1 is the *crude residual byproduct* of the $TiCl_4$ production after recovery of the $TiCl_4$, not merely the $FeCl_2$ or $MnCl_2$ component of this byproduct. While the byproduct promoter of claim 1 must at least contain either $FeCl_2$ or $MnCl_2$, the present application teaches that these byproducts are compositions that typically contain both of these metal chlorides, as well as others, such as vanadium chloride, and additional components, such as sand or coke. (See page 8, lines 19-23 and page 11, lines 4-7) Claim 1 has been amended to make this distinction more clear. As

amended, claim 1 is directed to a hydrocyanation process wherein the promoter is a byproduct of a method for producing $TiCl_4$ from titanium ore.

The chlorination process described at page 8, line 25 to page 9, line 2 in the present application is consistent with this characterization. This paragraph outlines a general process for chlorinating titanium-containing material in a fluidized bed reactor. As the material is chlorinated, gaseous $TiCl_4$ and other metal chlorides are exhausted from the reaction chamber. **Only $TiCl_4$** is separated from the crude material; all other solid components are left behind. This crude, multi-component byproduct can be used as the promoter of claim 1. The paragraphs at page 9, line 19 to page 10, line 18 likewise describe a process of producing and collecting a *byproduct* from the chlorination of titanium-rich ores that can be used as the promoter in the present invention.

The '453 patent fails to disclose the byproduct promoter of claim 1. The four paragraphs at column 12, lines 13-36 disclose the Lewis Acid promoters of the invention of the '453 patent. No mention is made of a *byproduct* promoter of any kind, let alone one produced as the result of a method for producing $TiCl_4$ from titanium ores. These paragraphs disclose only discrete Lewis Acid *compounds*, not byproduct compositions comprising any of these compounds. Furthermore, Examples 1, 2, and 3 disclose only the use of zinc (II) chloride ($ZnCl_2$) as the promoter; no other promoter is used. Thus, the difference between the process of claim 1 and that disclosed in the '453 patent is not the *source* of the promoter used, but rather the *type* of promoter used.

As a result, the process of amended claim 1 would not have been obvious to one of ordinary skill in the art in view of the '453 patent because there is no suggestion or motivation in the '453 patent to employ a byproduct of a method for producing $TiCl_4$ from titanium ores as a promoter. For a claim to be obvious in view of a prior art reference, there must be some suggestion or motivation in the reference to modify it so as to encompass the claimed invention. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). The '453 patent provides no suggestion or motivation to employ the byproduct promoters of amended claim 1, nor does it make any reference whatsoever to such compositions. Only those Lewis Acid compounds at column 12, lines 13-36 are suggested for use as promoters. Accordingly, Applicants respectfully submit that amended claim 1 is not obvious in view of the '453 patent and should be allowed.

In view of the above amendments and arguments, Applicants believe the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, should any fees be required in connection with this Amendment, authorization is hereby made to charge any fees due or outstanding, including any extension fees, or credit any overpayment, to Deposit Account No. 50-3223.

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Respectfully submitted,

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